

EXHIBIT 5

Expert Report of Gregory F. Scott
November 18, 2024

Expert Report of Greg Scott

Qualifications:

I am a former Natural Resources Conservation State Soil Scientist for Oklahoma. I earned a B.S. from Oklahoma State University in Agronomy, soils in May 1976. I earned a M.S. at OSU in Environmental Science-Geomorphology in December 1999. I was a Soil Science project member and project leader for the National Cooperative Soil Survey, Natural Resources Conservation Service (NRCS) in Oklahoma, Alaska, and North Dakota from 1976 to 1992. From 1992 to 2001, I was the Area Resource Soil Scientist in Northwest Oklahoma for NRCS offices in Area 1. From 2001 to 2007, I was the NRCS Major Land Resource Area (MLRA) Soil Survey Project Leader for the Rolling Red Prairies (MLRA 80A) and Northern Cross Timbers (MLRA) in Oklahoma, Kansas, and Texas. Thereafter, from 2007 to 2009, I was the Assistant State Soil Scientist for the NRCS in Oklahoma. In 2010, I became the state-wide State Soil Scientist for the NRCS in Oklahoma until 2012. In that job I was the Program lead for the NRCS in Oklahoma.

From 1992-2010, I was a privately employed consulting soil scientist for land application of drilling fluids in Oklahoma. From June 2013 to present, I have been a part-time soil scientist/geomorphologist for the Water Quality Division of the Oklahoma Conservation Commission. From 2013 to the present, I have also done private consulting work as a soil scientist for on-site waste treatment, cover crops, and regenerative grazing systems. Since 2001, I have run a cow-calf ranching operation in Lincoln County, Oklahoma.

I am not receiving any compensation for my services other than my salary and benefits with the Conservation Commission. My opinions are not dependent on my testimony in this matter. My opinions herein are based on my education, training, and experience, and are held to a reasonable degree of scientific certainty.

In the past four years I have not testified at trial or by deposition.

A copy of my resume is attached to this Report.

Familiarity with soil chemistry of phosphorus.

Based upon my education and long experience as a soil scientist, I am familiar with the behavior of phosphorus in soil. Poultry waste contains phosphorus. I can discuss this with the Court, but I believe the Court has already discussed it in some detail in its January 2023 Order. In short, when poultry waste is applied on the surface of the land, a certain portion of the phosphorus in it is subject to running off the surface of the land with rainwater. A portion of the phosphorus in land applied poultry waste enters the soil where some of the phosphorus is adsorbed by the soil, and other parts of the phosphorus, near the roots of plants, may be taken up by the plants. I understand the Court has already recognized the chemical equilibrium that exists between soluble and insoluble phosphorus in the soil in Finding of Fact 346. The more poultry waste is placed on the land, the more phosphorus enters the soil where it can reside for a long time.

In the chert geology of the Ozark uplift in the IRW, some of the phosphorus from the soil may enter the upper ground flow of water ultimately getting into the streams and rivers of the Illinois River Watershed (IRW). Phosphorus can also enter the waters of the IRW when soil containing phosphorus erodes and is mixed with water.

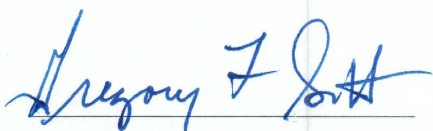
Fixing the water pollution problem must start by stopping the deposition of additional phosphorus in the watershed.

So long as poultry waste and phosphorus are land applied in the IRW, phosphorus concentrations in the soil will continue to climb. Phosphorus will continue to leak from the soils of the IRW for decades, and even longer if land application continues.

To help reverse the phosphorus pollution in the waters of the IRW, we have to stop making the problem worse. That means we need to stop the land application of poultry waste. Nothing else will begin to clean up the problem until the land application of poultry waste stops. As it is,

if we stopped land application today, “legacy” phosphorus already in the soil from decades of land application will continue to leak into the waters for decades.

Additionally, correctly placed and well-designed buffer strips would stop the progress of phosphorus in its inevitable leakage from the land into the water and ultimately into Lake Tenkiller. However, such phosphorus is not actually removed from the system. Haying grass grown in the IRW and physically removing it from the watershed would help deplete the amount of the legacy phosphorus. Removing one ton of hay grown in the phosphorus laden soils of the IRW would remove about 15-20 pounds of phosphorus per ton of hay. This would help remove the phosphorus from the watershed and make a cleanup of the water occur faster.

A handwritten signature in blue ink, appearing to read "Gregory F. Scott", is written over a horizontal line.

Gregory F. Scott

November 18, 2024

References:

Nyle C. Brady & Ray R. Weil, *The Nature and Properties of Soils* (13th Ed. Prentice Hall 2001).

WARDGUIDE (Ward Laboratories, Kearney, NE), publicly available at [WardGuide-Master-20211118.pdf](#).

Gregory F. Scott—November, 2024

Education:

BS, Agronomy, soils, May 1976, Oklahoma State University

MS, Environmental Science-Geomorphology, Dec 1999, Oklahoma State University.

Thesis: AEOLIAN MODIFICATION OF PLEISTOCENE TERRACES ALONG THE CIMARRON RIVER IN
MAJOR COUNTY, OKLAHOMA

Experience:

1976-1992; Soil Scientist project member and project leader, National Cooperative Soil Survey, Natural Resources Conservation Service, (Oklahoma, Alaska, North Dakota).

1992-2001; Area Resource Soil Scientist, northwest Oklahoma, serving NRCS offices in Area 1.

2001-2007: MLRA Soil Survey project leader for the Rolling Red Prairies (MLRA 80A) and Northern Cross Timbers (MLRA 84A) in Oklahoma/Kansas/Texas.

2007-2009: Assistant State Soil Scientist for the Natural Resources Conservation Service, Oklahoma.

2010-2012: State Soil Scientist for the Natural Resources Conservation Service, Oklahoma. Program lead for the National Cooperative Soil Survey in Oklahoma.

June-2013-present: Staff soil scientist/geomorphologist (part-time) for the Water Quality Division of the Oklahoma Conservation Commission.

1992-2010: Consulting soil scientist for land application of drilling fluids in Oklahoma.

2001-present: Ranching, cow-calf operation in Lincoln County, Oklahoma

2013-present: Consulting soil scientist for on-site waste treatment, cover crops, regenerative grazing systems.

Certifications:

1984-2019: Certified Professional Soil Scientist (ARCPACS).

2013-present: Certified Soil Profiler through Oklahoma DEQ.

2008-2019: Board member, No-Till on the Plains

2017-present: Director, Lincoln County Conservation District

1983-2019: Member, Soil Science Society of America

Gregory F. Scott

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